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Application Number	10/764,679
Filing Date	January 26, 2004
First Named Inventor	Eric Watson
Group Art Unit	2163
Examiner Name	Ms. Shectman
Attorney Docket Number	303248.01

ENCLOSURES *(check all that apply)*

☐ Fee Transmittal Form
☐ Fee Attached

☐ Amendment / Reply
☐ After Final
☐ Affidavits/declaration(s)

☐ Extension of Time Request

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☐ Information Disclosure Statement with Form PTO/SB/08A (pages)

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☐ Assignment Papers
(for an Application)

☐ Drawing(s) (sheets)

☐ Declaration
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☐ A copy from a prior application (37 CFR 1.63(d)) (pages)

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☐ Petition to Convert to a Provisional Application

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	Eric Watson	Attorney Docket No.:	303248.01
Application No.:	10/764,679	Group Art Unit	2163
Filed:	01/26/2004	Examiner:	Ms. Shectman
Customer No.:	22971	Confirmation Number:	9444
Title: QUERY PREPROCESSING AND PIPELINING			

APPEAL BRIEF

To: Mail Stop Appeal Brief – Patents
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Pursuant to 37 C.F.R. § 41.37, Applicant submits this Appeal Brief for the above-mentioned patent application. Accordingly, Applicant appeals to the Board of Patent Appeals and Interferences seeking review of the Examiner's rejection.

I.   **Real Party in Interest.**

The real party in interest is Microsoft Corporation, the assignee of all right, title and interest in and to the subject invention.

II.   **Related Appeals and Interferences.**

None.

III. **Status of Claims.**

Claims 1–41 stand rejected and are pending in the Application. Claims 1–41 are appealed.

IV.   **Status of Amendments.**

A Final Office Action was mailed on February 9, 2007. No amendments have been submitted since the issuance of the Final Office Action.

V.   **Summary of Claimed Subject Matter.**

The pending independent claims are claims 1, 16, 27, and 35.

Claim 1

Claim 1 recites:

For use with a search engine, a query pipelining system that selectively executes a user entered query made up of a string of query terms on a plurality of data sources *(Figure 2; page 4, lines 5-11)* comprising:

a query term recognizer that examines the query terms and identifies and automatically groups query terms that are intended as a phrase *(Figure 3, item 181; Figure 2, item 124; and page 9, line 16, t page 10, line 2)*;

a query type recognizer that examines the query terms and categorizes the query as one of a plurality of query types *(Figure 3, item 183; Figure 2, item 124; page 2, lines 7-11; and page 9, line 20 to page 10, line 2)*;

a query intent personalizer that gathers information about the user entering the query and provides this information to the query term recognizer and query type recognizer *(Figure 2, item 124; Figure 4, item 212; page 6, line 18 to page 7, line 3; and page 7, line 13 to page 8, line 5)*;

a query modifier that modifies the user entered query based on the term grouping determined by the query term recognizer and the query type determined by the query type recognizer *(Figure 3, item 186; page 9, lines 4-11; and page 10, lines 3-17)*; and

a query federation module that selects data sources from the plurality of data sources and executes the modified query on the selected data sources *(Figure 4, items126, 226, 228, and 210; Figure 3, item 191; and page 6, lines 5-11)*.

Claim 16

Claim 16 recites:

For use with a search engine query preprocessor *(Figure 3, item 214)*, a method that selectively executes a query made up of a string of query terms on a plurality of data sources *(Figure 2; page 4, lines 5-11)* comprising:

obtaining context information about the origin of the query *(Figure 3, item 177; page 2, lines 6-9; and page 6, line 21 to page 7, line 3)*;

automatically classifying the query as one of a set of query categories by selecting one of a set of query categories based on the presence of query terms and context information *(Figure 3, item 183; Figure 2, item 124; page 2, lines 7-11; and page 9, line 20 to page 10, line 2)*;

automatically modifying the query to include the query category *(Figure 3, item 186; page 9, lines 4-11; and page 10, lines 3-17)*; and

executing the modified query on a data source that contains information related to the query category *(Figure 3, items 187 and 189; and page 12, lines 4-13)*.

Claim 27

Claim 27 recites:

For use with a search engine query preprocessor *(Figure 3, item 214)*, a method that selectively executes a query made up of a string of query terms on a plurality of data sources *(Figure 2; page 4, lines 5-11)* comprising:

obtaining context information about the origin of the query *(Figure 3, item 177; page 2, lines 6-9; and page 6, line 21 to page 7, line 3)*;

automatically classifying the query as one of a set of query categories by selecting one of a set of query categories based on the presence of query terms and

context information *(Figure 3, item 183; Figure 2, item 124; page 2, lines 7-11; and page 9, line 20 to page 10, line 2)*;

automatically modifying the query to include the query category *(Figure 3, item 186; page 9, lines 4-11; and page 10, lines 3-17)*; and

executing the modified query on a data source that contains information related to the query category *(Figure 3, items 187 and 189; and page 12, lines 4-13)*.

Claim 35

Claim 35 recites:

For use with a search engine query preprocessor, an apparatus for executing a query made up of a string of query terms on selected data sources comprising:

means for obtaining context information about the origin of the query *(Figure 3, item 177; page 2, lines 6-9; and page 6, line 21 to page 7, line 3)*;

means for classifying the query as one of a set of query categories by automatically selecting one of a set of query categories based on the presence of query terms and context information *(Figure 3, item 183; Figure 2, item 124; page 2, lines 7-11; and page 9, line 20 to page 10, line 2)*;

means for automatically modifying the query to include the query category *(Figure 3, item 186; page 9, lines 4-11; and page 10, lines 3-17)*; and

means for executing the modified query on a data source that contains information related to the query category *(Figure 3, items 187 and 189; and page 12, lines 4-13)*.

VI.   Grounds of Rejection to be Reviewed on Appeal.

The rejection of claims 1-41 under 35 U.S.C. 103(a) as being obvious over U.S.

patent publication 2005/0004889 (Bailey) in view of U.S. patent publication

2006/0122969 (Kapur).

VII.   Argument.

Rejection of claims 1-41 as obvious over Bailey in view of Kapur.

<u>Argument: Kapur Is Not Prior Art</u>

The present application was filed <u>January 26, 2004</u>. All of the claims are

rejected as obvious over Bailey in view of Kapur. Kapur was filed on <u>December 6,</u>

<u>2004</u>. Paragraph [0001] of Kapur is reproduced below:

> The present disclosure is related to the following
> commonly assigned applications/patents:
> U.S. Patent Application No. 10/712,307, filed November
> 12, 2003, entitled "Systems and Methods for Search Query
> Processing Using Trend Analysis" to Kapur (hereinafter "Kapur I");
> U.S. Patent Application No. 10/713,576, filed November
> 12, 2003, entitled "Systems and Methods for Generating Concept
> Units from Search Queries" to Kapur et al. (hereinafter "Kapur II");
> U.S. Patent Application No. 10/797,614, filed March 9,
> 2004, entitled "Systems and Methods for Search Processing Using
> Superunits" to Kapur et al. (hereinafter "Kapur III"); and
> U.S. Patent Application No. 10/818,752, filed April 5,
> 2004, entitled "Universal Search Interface System and Methods" to
> Kapur (hereinafter "Kapur IV").
> The respective disclosures of these applications/patents
> are incorporated herein by reference in their entirety for all
> purposes.

A careful review of the history of Kapur reveals no priority claim to any of the

four related patent applications mentioned in Kapur. Paragraph [0001] of Kapur only

incorporates by reference the disclosures of prior patent applications. Kapur's

Application Data Sheet has fields for claiming domestic or foreign priority, but these fields are blank. Kapur's specification was amended on October 24, 2005 to add another related application. No priority was claimed. *Nowhere does Kapur claim priority to any earlier patent application.* Kapur's date as a reference is December 6, 2004, its filing date, which postdates the present application's filing date of January 26, 2004. Under no provision of 35 U.S.C. section 102 does Kapur qualify as prior art against the present application.

For the foregoing reasons, the Examiner's rejections should be reversed.

Respectfully submitted,

Microsoft Corporation

Date: _13 Nov 2007_   By: ___/James T. Strom/___

James T. Strom, Reg. No.: 48,702
Attorney for Applicants
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13 Nov 2007   _Christine Hartness_
Date   Christine Hartness

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VIII.   Claims Appendix.

1.   For use with a search engine, a query pipelining system that selectively executes a user entered query made up of a string of query terms on a plurality of data sources comprising:

a query term recognizer that examines the query terms and identifies and automatically groups query terms that are intended as a phrase;

a query type recognizer that examines the query terms and categorizes the query as one of a plurality of query types;

a query intent personalizer that gathers information about the user entering the query and provides this information to the query term recognizer and query type recognizer;

a query modifier that modifies the user entered query based on the term grouping determined by the query term recognizer and the query type determined by the query type recognizer; and

a query federation module that selects data sources from the plurality of data sources and executes the modified query on the selected data sources.

2.   The system of claim 1 comprising a spell checker that recognizes misspelled query terms and replaces the misspelled query terms with correctly spelled terms and wherein the query term recognizer and query type recognizer examine the correctly spelled terms.

3.   The system of claim 2 wherein the spell checker augments the query with correctly spelled terms and wherein the query term recognizer and query type recognizer examine the augmented query.

4.   The system of claim 1 comprising a query term list that maps possible query terms to other terms with which they are often grouped and wherein the query term recognizer refers to the query term list to identify and group terms as phrases.

5.   The system of claim 1 comprising a query term list that maps possible query terms to categorization terms and wherein the query type recognizer refers to the query term list to assign a type to the query.

6.   The system of claim 1 wherein the query type recognizer includes a local pattern recognizer that identifies query terms that identify the query as a local query seeking information related to a specific geographic region from which the query originated.

7.   The system of claim 6 wherein the query type recognizer augments the query with information about the specific geographic region when a local query is identified.

8.   The system of claim 7 wherein the query federation module selects a phone directory data source upon which to execute the local query.

9.   The system of claim 1 wherein the query intent personalizer includes a context builder that retrieves information about the user entering the query.

10.   The system of claim 9 wherein the information about the user includes web sites recently accessed by the user.

11.   The system of claim 1 wherein the federation module includes a plurality of federation engines each dedicated to a specific data source and wherein each federation engine selectively executes the modified query on its data source based on the presence of triggering query terms in the modified query.

12.   The system of claim 11 wherein each federation engine has an associated cache that saves results to previous queries that were returned to the federation engine from its data source.

13.   The system of claim 1 comprising a query tracking module that records a user entered query, a modified query corresponding to the user entered query, and results returned by the modified query that were selected by the user.

14.   The system of claim 4 wherein the query term list is based on user selected results to previous queries containing query terms that were grouped as a phrase in the selected results.

15. The system of claim 5 wherein the query term list maps terms to query categories based on user selected results to previous queries that included the query terms.

16. For use with a search engine query preprocessor, a method that selectively executes a query made up of a string of query terms on a plurality of data sources comprising:

obtaining context information about the origin of the query;

automatically classifying the query as one of a set of query categories by selecting one of a set of query categories based on the presence of query terms and context information;

automatically modifying the query to include the query category; and

executing the modified query on a data source that contains information related to the query category.

17. The method of claim 16 comprising maintaining a list of query terms mapped to categorization codes and wherein the query is classified by selecting a category code that corresponds to query terms in the query.

18. The method of claim 16 wherein one of the query categories is a local query and wherein the local queries are modified to include query context information that identifies the geographic region from which the query originates.

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19. The method of claim 18 wherein the data source is a phone directory data source.

20. The method of claim 17 wherein the list of query terms is mapped to categorization codes based on a category of user selected results to previous queries containing the query terms.

21. The method of claim 17 comprising presenting the modified query to a plurality of federation engines each of which selectively executes the modified query on a data source associated with the federation engine.

22. The method of claim 21 comprising maintaining a cache for each federation engine that stores results to previously executed queries on the associated data source.

23. The method of claim 16 comprising grouping query terms as phrases and modifying the query to reflect the grouping.

24. The method of claim 23 wherein terms are grouped as phrases when previous queries containing the terms returned user selected results that grouped the terms as phrases.

25. The method of claim 16 comprising augmenting the query with correctly spelled versions of any misspelled query terms.

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26. A computer readable medium comprising computer executable instructions for performing the method of claim 16.

27. For use with a search engine query preprocessor, a computer readable medium comprising computer executable instructions for executing a query made up of a string of query terms on selected data sources comprising:

obtaining context information about the user entering the query;

examining the query terms and automatically grouping terms that are intended as a phrase based on the gathered context;

examining the query terms and automatically categorizing the query as one of a plurality of query types based on the gathered context;

modifying the user entered query based on the term grouping and query type; and

selectively executing the modified query on the data sources.

28. The computer readable medium of claim 27 wherein the computer-executable instructions comprise replacing any misspelled query terms with correctly spelled terms examining the query containing the correctly spelled terms.

29. The computer readable medium of claim 27 wherein the computer-executable instructions comprise mapping possible query terms to other terms with which they are often grouped in a grouping list and identifying terms to be grouped as phrases based on the grouping list.

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30. The computer readable medium of claim 27 wherein the computer-executable instructions comprise mapping possible query terms to categorization terms in a categorization list and assigning a type to the query based on the categorization list.

31. The computer readable medium of claim 27 wherein the computer-executable instructions comprise recognizing local query terms that identify the query as a local query seeking information related to a specific geographic region from which the query originated.

32. The computer readable medium of claim 31 wherein the computer-executable instructions comprise augmenting the query with information about the specific geographic region when a local query is identified.

33. The computer readable medium of claim 27 wherein the computer-executable instructions comprise presenting the modified query to a plurality of federation engines each dedicated to a specific data source and wherein each federation engine selectively executes the modified query on its data source based on the presence of triggering query terms in the modified query.

34. The computer readable medium of claim 33 wherein each federation engine has an associated cache that saves results to previous queries that were returned to the federation engine from its data source.

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35.   For use with a search engine query preprocessor, an apparatus for executing a query made up of a string of query terms on selected data sources comprising:

means for obtaining context information about the origin of the query;

means for classifying the query as one of a set of query categories by automatically selecting one of a set of query categories based on the presence of query terms and context information;

means for automatically modifying the query to include the query category; and

means for executing the modified query on a data source that contains information related to the query category.

36.   The apparatus of claim 35 comprising means for maintaining a list of query terms mapped to categorization codes and wherein the means for classifying selects a category code that corresponds to query terms in the query.

37.   The apparatus of claim 36 wherein the list of query terms is mapped to categorization codes based on a category of results to the queries containing the query terms that were selected.

38.   The apparatus of claim 35 comprising means for presenting the modified query to a plurality of federation engines each of which selectively executes the modified query on a data source associated with the federation engine.

39.   The apparatus of claim 38 comprising means for maintaining a cache for each federation engine that stores results to previously executed queries on the associated data source.

40.   The apparatus of claim 35 comprising means for grouping query terms as phrases and means for modifying the query to reflect the grouping.

41.   The apparatus of claim 35 comprising means for augmenting the query with correctly spelled versions of any misspelled query terms.

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IX.   EVIDENCE APPENDIX.

None.

X.   RELATED PROCEEDINGS APPENDIX.

None.